

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A guide catheter adapted to afford coronary vasculature branch sub-election comprising:

a proximal end, a distal tip, and a first elongated sheath adapted to cannulate a coronary sinus; and having proximal end, a distal tip, and the first elongated sheath having a sheath wall forming an inner channel to accommodate travel of a medical component; the first elongated sheath comprising

the sheath wall and distal tip being constructed of a polymeric material; a singular, first material in the distal tip, wherein the first material that is both radio-opaque and echogenic,

wherein the first material in the distal tip is jet-milled tungsten carbide particles, the particles being distributed within the polymeric material in a concentration that is approximately 70 to 75 percent by weight and have an average diameter approximately less than or equal to 500 nanometers ; [,.]] and

a second material in a wall of the sheath; a reinforcing braid in the sheath wall, the braid having a plurality of strands, wherein the second material is a reinforcing braid formed within the sheath, wherein the braid includes a plurality of strands and at least one strand of the plurality of strands forming the reinforcing braid includes including a radio-opaque material; [,.]] and

wherein jet-milled tungsten carbide particles are distributed within a polymeric material of the first material between approximately 70 to

~~75 percent by weight and have an average diameter approximately less than or equal to 500 nanometers; and~~

a second elongated sheath adapted to be passed through the inner channel of the first elongated sheath and to cannulate primary and secondary branch veins of a vasculature and having proximal end, a distal tip, and an inner channel to accommodate travel of a medical component; and

wherein the distal tip of the second elongated sheath is formed of a material having a hardness between approximately 25D and 35D durometer, is fully radiopaque and echogenic and has a length greater than or equal to approximately 0.08 inch.

2. (Previously presented) The guide catheter of claim 1, wherein the distal tip of the second elongated sheath is formed of a material comprising tungsten carbide particles.

3. (Previously presented) The guide catheter of claim 1, wherein the length of the distal tip of the second elongated sheath is between approximately 0.08 inch and approximately 0.2 inch.

4. (Previously presented) The guide catheter of claim 1, wherein the length of the distal tip of the second elongated sheath is greater than or equal to approximately 0.2 inch.

5. (Previously presented) The guide catheter of claim 1, wherein the length of the distal tip of the second elongated sheath is between approximately 0.4 inch and approximately 2 inch.

6. (Previously presented) The guide catheter of claim 2, wherein the tungsten carbide particles of the second elongated sheath have an average size less than or equal to approximately 500 nanometers.

7. (Previously presented) The guide catheter of claim 6, wherein the tungsten carbide particles of the second elongated sheath have an average size between approximately 100 nanometers and approximately 200 nanometers.

8. (Previously presented) The guide catheter of claim 6, wherein the tungsten carbide particles of the second elongated sheath have an average size less than or equal to approximately 200 nanometers

9. (Previously presented) The guide catheter of claim 2, wherein the tungsten carbide particles of the second elongated sheath are approximately 40% to approximately 80% by weight of the fully radiopaque and echogenic distal tip.

10. (Previously presented) The guide catheter of claim 9, wherein the tungsten carbide particles of the second elongated sheath are approximately 70% to approximately 80% by weight of the fully radiopaque and echogenic distal tip.

11. Cancelled.

12. Cancelled.

13. (Previously presented) The guide catheter of claim 1, wherein the distal tip of the second elongated sheath includes a first resilient preformed curve.

14. (Original) The guide catheter of claim 13, wherein the first curve sweeps about an angle greater than or equal to approximately 180°.

15. (Original) The guide catheter of claim 13, wherein the first curve sweeps about an angle of approximately 90°.

16. (Original) The guide catheter of claim 13, wherein the first curve sweeps about an angle between approximately 10° and approximately 70°.

17. (Previously presented) The guide catheter of claim 13, wherein the distal tip further includes a second resilient preformed curve extending from the first resilient preformed curve.

18. (Original) The guide catheter of claim 17, wherein the first and second curves, together, sweep about an angle greater than approximately 90°.

19. (Original) The guide catheter of claim 17, wherein the first curve sweeps about an angle between approximately 160° and approximately 180° and the second curve sweeps, in an opposite direction to the first curve, about an angle between approximately 40° and approximately 80°.

20. (Original) The guide catheter of claim 17, wherein the first curve and the second curve form an Amplatz shape.

21. (Previously presented) The guide catheter of claim 17, wherein the distal tip further includes a third resilient preformed curve extending from the second resilient preformed curve.

22. (Original) The guide catheter of claim 21, wherein the first, second and third curves, together, sweep about an angle greater than approximately 100°.

23. (Previously presented) The guide catheter of claim 1, wherein the distal tip of the first elongated sheath includes a tapered transition.

24. (Previously presented) The guide catheter of claim 13, wherein the distal tip of the first elongated sheath includes a tapered transition.

25. (Original) The guide catheter of claim 24, wherein the tapered transition is located proximal to the first resilient preformed curve.

26. (Previously presented) The guide catheter of claim 17, wherein the distal tip includes a tapered transition.

27. (Original) The guide catheter of claim 26, wherein the tapered transition is located proximal to the second resilient preformed curve.

28. (Previously presented) The guide catheter of claim 21, wherein the distal tip includes a tapered transition.

29. (Original) The guide catheter of claim 28, wherein the tapered transition is located proximal to the third resilient preformed curve.

30. Cancelled.

31. (Previously presented) The guide catheter of claim 1, wherein
the second elongated sheath further includes a proximal segment; the
proximal segment including a distal end; and
the fully radiopaque and echogenic distal tip is coupled to the distal end of
the proximal segment by means of a butt joint.

32. (Original) The guide catheter of claim 31, wherein the butt joint is heat fused.

33. (Original) The guide catheter of claim 32, wherein the butt joint is formed by an RF process.

34. (Previously presented) The guide catheter of claim 33, wherein the distal tip includes a tapered transition formed in a RF die.

35. (Previously presented) The guide catheter of claim 1, wherein:

The second elongated sheath further includes a proximal segment having a first stiffness and including a distal end; and

the distal tip is coupled to the distal end of the proximal segment and has a second stiffness, which is less than the first stiffness.

36. (Previously presented) The guide catheter of claim 1, wherein the distal tip of the second elongated sheath is atraumatic.

37. (Previously presented) The guide catheter of claim 1, wherein

The second elongated sheath further includes a proximal segment; the proximal segment including a distal end and a proximal segment outer diameter; and

the distal tip of the second elongated sheath is coupled to the distal end of the proximal segment and includes a distal tip outer diameter, which is less than the proximal segment outer diameter.

38. – 69. Cancelled.

70. (Withdrawn) A guide catheter, comprising:

an outer sheath; and

an inner sheath slideably engaged within the outer sheath and including a fully radiopaque distal tip having a length greater than or equal to approximately 0.2 inch;

wherein the inner sheath engaged within the outer sheath may be positioned such that the radiopaque distal tip protrudes from a distal end of the outer sheath.

71. (Withdrawn) The guide catheter of claim 70, wherein the fully radiopaque distal tip is also fully echogenic.

72. (Withdrawn) The guide catheter of claim 71, wherein the distal tip is formed of a material comprising tungsten carbide particles.

73. (Withdrawn) The guide catheter of claim 72, wherein the fully radiopaque distal tip includes a first resilient preformed curve.

74. (Withdrawn) The guide catheter of claim 73, wherein the first curve sweeps about an angle greater than or equal to approximately 180°.

75. (Withdrawn) The guide catheter of claim 73, wherein the first curve sweeps about an angle of approximately 90°.

76. (Withdrawn) The guide catheter of claim 73, wherein the first curve sweeps about an angle between approximately 10° and approximately 70°.

77. (Withdrawn) The guide catheter of claim 73, wherein the fully radiopaque distal tip further includes a second resilient preformed curve extending from the first resilient preformed curve.

78. (Withdrawn) The guide catheter of claim 77, wherein the first and second curves, together, sweep about an angle greater than approximately 90°.

79. (Withdrawn) The guide catheter of claim 77, wherein the first curve sweeps about an angle between approximately 160° and approximately 180° and the second curve sweeps, in an opposite direction to the first curve, about an angle between approximately 40° and approximately 80°.

80. (Withdrawn) The guide catheter of claim 77, wherein the first curve and the second curve form an Amplatz shape.

81. (Withdrawn) The guide catheter of claim 77, wherein the fully radiopaque distal tip further includes a third resilient preformed curve extending from the second resilient preformed curve.

82. (Withdrawn) The guide catheter of claim 81, wherein the first, second and third curves, together, sweep about an angle greater than approximately 100°.

83. (Withdrawn) The guide catheter of claim 70, wherein the fully radiopaque distal tip includes a tapered transition.

84. (Withdrawn) The guide catheter of claim 73, wherein the fully radiopaque distal tip includes a tapered transition.

85. (Withdrawn) The guide catheter of claim 84, wherein the tapered transition is located proximal to the first resilient preformed curve.

86. (Withdrawn) The guide catheter of claim 77, wherein the fully radiopaque distal tip includes a tapered transition.

87. (Withdrawn) The guide catheter of claim 86, wherein the tapered transition is located proximal to the second resilient preformed curve.

88. (Withdrawn) The guide catheter of claim 81, wherein the fully radiopaque distal tip includes a tapered transition.

89. (Withdrawn) The guide catheter of claim 88, wherein the tapered transition is located proximal to the third resilient preformed curve.

90. (Withdrawn) A method for positioning a guide catheter within a body in order to deliver a medical device or agent, comprising:

advancing an inner sheath of the guide catheter through an outer sheath of the guide catheter such that distal tip of the inner sheath extends distally from a distal end of the outer sheath;

wherein the distal tip of the inner sheath is fully radiopaque.

91. (Withdrawn) The method of claim 90, wherein the distal tip is also fully echogenic.

92. (Withdrawn) The method of claim 91, further comprising visualizing the distal tip of the inner sheath by means of ultrasound.

93. (Withdrawn) The method of claim 90, further comprising cannulating a coronary sinus with the distal end of the outer sheath such that advancing the inner sheath positions the distal tip of the inner sheath within the coronary vasculature.

94. (Withdrawn) The method of claim 90, further comprising dilating of a structure of coronary vasculature when the inner sheath is advanced.

95. (Withdrawn) The method of claim 90, further comprising cannulating a coronary sinus with the distal tip of the inner sheath.

96. (Withdrawn) The method of claim 90, further comprising cannulating a branch vein of the coronary vasculature with the distal tip of the inner sheath.

97. (Withdrawn) The method of claim 96, further comprising advancing a guide wire through the inner sheath, out through the distal tip of the inner sheath and into the branch vein.

98. (Withdrawn) The method of claim 96, further comprising advancing a lead through the inner sheath, out through the distal tip of the inner sheath and into the branch vein.

99. (Withdrawn) The method of claim 97, further comprising advancing a lead over the guide wire and into the branch vein.